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United States  
Department of  
Agriculture

Soil  
Conservation  
Service



# Idaho

## Basin Outlook Report

### March 1, 1994





# Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, contact:  
Your local Soil Conservation Service Office

or

Soil Conservation Service  
Snow Surveys  
3244 Elder Street, Room 124  
Boise, ID 83705-4711  
(208) 334-1614

How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Soil Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

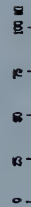
Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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## IDAHO MOUNTAIN SNOWPACK

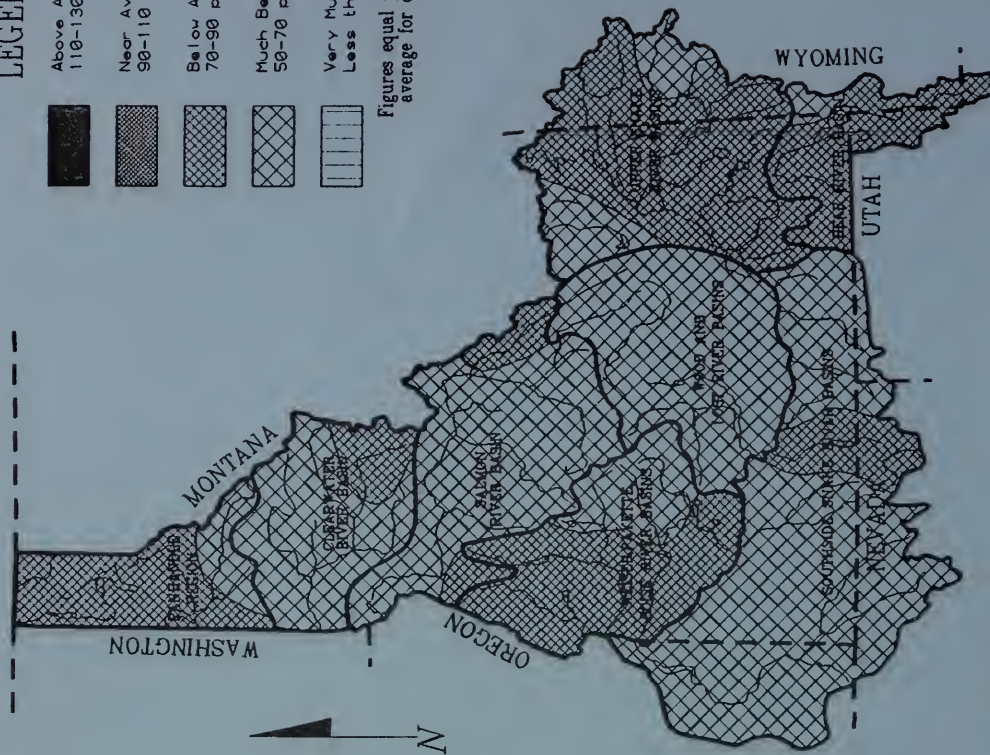
MARCH 1, 1994



### LEGEND



Figures equal percent of average for drainage



SOIL CONSERVATION SERVICE  
U.S. DEPARTMENT OF AGRICULTURE



# **IDAHO WATER SUPPLY OUTLOOK REPORT**

**MARCH 1, 1994**

## **SUMMARY**

Snowfall was good to Idaho in February; above normal precipitation fell across the state for the first time this water year. Unfortunately, it's a case of too little, too late. In spite of the good snowfall, snowpack averages have increased only slightly from the figures reported last month and are currently ranging from 60-75% throughout the state. Streamflow forecasts continue to call for well below normal flows statewide. Reservoir storage will be the saving grace for Idaho's water supply in 1994: good carryover storage should enable most water users to just get by this year. Potentially empty reservoirs at the end of this irrigation season could leave Idaho totally dependent on the winter of 1994-1995 for next year's water supply.

## **SNOWPACK**

February brought the winter's best snowfall to Idaho. Much of central and southern Idaho and the Upper Snake basin received above average precipitation for the first time this water year. Northern Idaho's snowfall was only slightly below average, still the best month of the water year so far. With most of the winter behind us, however, snowpack percentages have improved only slightly from the figures reported last month. Snowpacks are surprisingly uniform throughout the state and currently range from just 60-75% of average with few exceptions. Eastern Idaho basins are almost 80% of average while the Wood and Lost basins are 55-60%. March is typically the last significant snowfall month. In some years, however, snow can continue to accumulate at the higher elevations in April and into May. Let's hope this year is one of them!

## **PRECIPITATION**

February was a wet month for most of Idaho. Mountain SNOTEL sites reported above average precipitation for most of central and southern Idaho, with Northern Idaho not far behind at slightly below average. A particularly heavy storm period during the last week of February brought significant moisture to much of the state. Water year-to-date mountain precipitation for most Idaho basins hovers around the 70% of average mark. With most of the wet season behind us, that figure is unlikely to change much as we enter the drier months ahead.



## RESERVOIRS

Reservoir storage continues to be the bright spot in an otherwise gloomy water supply picture for 1994. Thanks to heavy snowfall and a cool, wet spring last year, many Idaho reservoirs are reporting near to above average carryover storage this year. The upper Snake basin reports the best storage in the state: the system is currently 87% full or 121% of average. The Payette and Boise basins also report above average storage for this time of year. Irrigators in the Boise valley are happy to see near normal carryover for the first time in 7 years. Expected low inflows this year underscore the importance of water conservation this summer. Wise water use will help provide carryover storage at the end of the 1994 irrigation season.

Note: SCS reports reservoir information in terms of usable volumes, which includes both active, inactive, and in some cases dead storage. Other operators may report reservoir contents in different terms. For additional information, see the reservoir definitions in the back of this report.

## STREAMFLOW

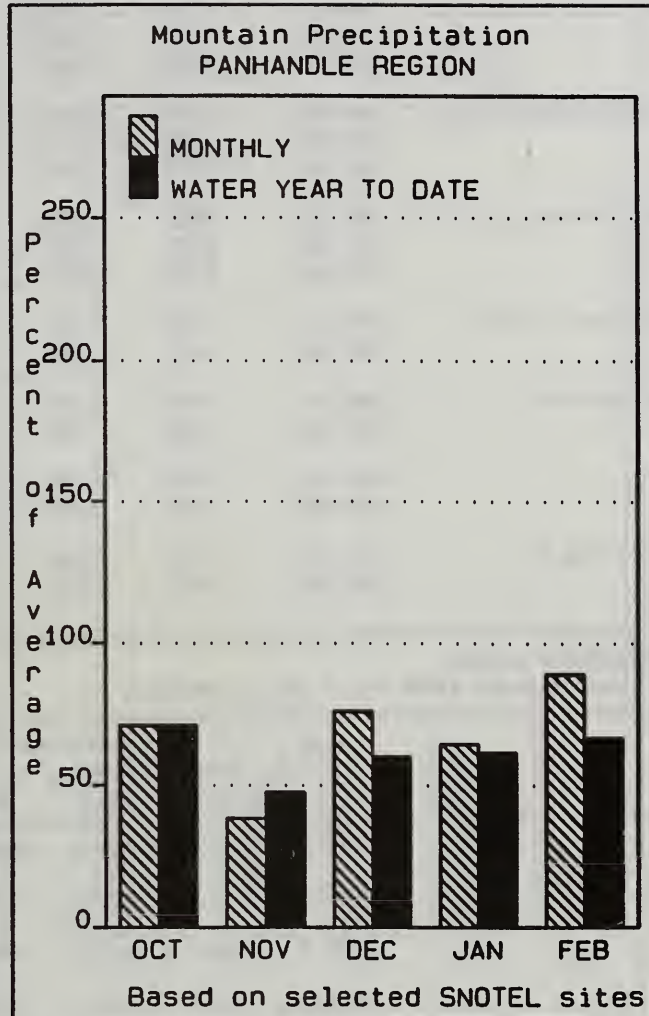
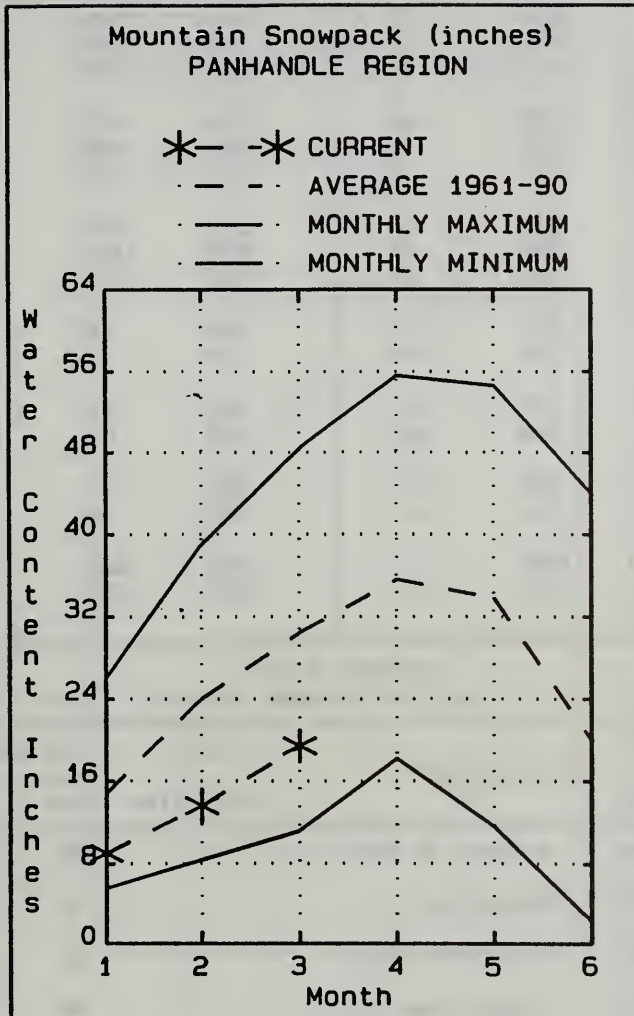
Winter streamflow continues to be well below normal in all areas of Idaho except the Henrys Fork and upper main stem of the Snake River where near average flows are reported. Despite above average precipitation during February (mostly as snow), monthly streamflows were only 30 to 65% of average everywhere except the Snake and Henrys Fork in eastern Idaho where near average flows occurred. The October-February totals are just 50 to 75% of average except in the upper Snake (90 to 100%). As a result, reservoir storage is increasing slower than normal. Although most forecasts for the coming season's runoff have increased from last month, flows are still expected to be well below normal. With few exceptions, forecasts call for just 50 to 75% of average seasonal runoff volumes. Despite good reservoir carryover storage from last year in many impoundments, the low streamflow projections indicate that overall water supplies could be marginal again this year.

## RECREATION OUTLOOK

February brought good snowfall to most of Idaho, improving snowpack figures slightly from those reported last month. Currently, snowpack figures are 60-75% of average statewide, and spring and summer streamflow prospects call for similar values. River runners in northern and central Idaho can expect lower than normal peak flows and an earlier than normal recession to low flow conditions. The shorter high water period will reduce some of the hazards associated with high flows and open up the rivers to more recreational users earlier than normal. Southwest Idaho Rivers (Jarbidge, Bruneau, and Owyhee) will most likely have a short season this year. Rivers with reservoir augmentation (Payette, Snake, and Boise) should have good downstream flows due to excellent carryover storage this year. Reservoir users should expect earlier than normal drawdowns as this important resource is used to augment the low expected streamflows.

## PANHANDLE REGION

MARCH 1, 1994



### WATER SUPPLY OUTLOOK

The Idaho Panhandle received slightly less than its normal precipitation during February, the best month so far this water year. This has improved snowpacks 5-10 percentage points from the figures reported last month, but conditions are still well below normal. Snowpacks currently range from about 60-70% of average for most watersheds. Streamflow forecasts did not change significantly from last month, and still call for only 60-70% of normal runoff. Storage in Pend Oreille, Priest, and Coeur d'Alene Lakes are all below normal for this time of year. Water users should be prepared for below normal spring and summer water supplies this year.



PANHANDLE REGION  
Streamflow Forecasts - March 1, 1994

Forecast Point	Forecast Period	<===== Drier ===== Future Conditions ===== Wetter =====>						
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
KOOTENAI at Leonia (1,2)	APR-JUN	3080	3900	4280	75	4660	5480	5701
	APR-JUL	3880	4910	5380	75	5850	6880	7199
	APR-SEP	4460	5640	6180	75	6720	7900	8275
CLARK FK at Whitehorse Rpds (1,2)	APR-JUN	4390	6070	6830	68	7590	9270	10050
	APR-JUL	5060	7030	7920	68	8810	10800	11730
	APR-SEP	5570	7740	8720	68	9700	11900	12910
PEND OREILLE Lake Inflow (1,2)	APR-JUN	4500	6500	7404	65	8310	10300	11390
	APR-JUL	5470	7590	8548	65	9510	11600	13150
	APR-SEP	5750	8290	9341	65	10400	13100	14370
PRIEST nr Priest River (1,2)	APR-JUL	395	545	611	75	680	830	814
	APR-SEP	420	580	651	75	725	880	868
COEUR D'ALENE at Enaville	APR-JUL	350	460	531	69	605	710	770
	APR-SEP	285	485	560	69	635	810	809
ST. JOE at Calder	APR-JUL	525	650	736	63	820	945	1169
	APR-SEP	495	655	742	60	830	990	1237
SPOKANE near Post Falls (2)	APR-JUL	1040	1380	1620	62	1860	2200	2633
	APR-SEP	685	1400	1638	60	1880	2570	2730

PANHANDLE REGION  
Reservoir Storage (1000 AF) - End of February

PANHANDLE REGION  
Watershed Snowpack Analysis - March 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HUNGRY HORSE	3451.0	793.2	844.0	2205.0	Kootenai ab Bonners Ferry	14	96	69
FLATHEAD LAKE	1791.0	743.2	684.8	881.0	Moyie River	1	95	57
NOXON RAPIDS	335.0	326.7	227.5	298.1	Clark Fork River	57	90	68
PEND OREILLE	1561.3	545.3	554.2	831.8	Priest River	3	92	73
COEUR D'ALENE	238.5	35.5	39.6	149.1	Pend Oreille River	81	96	73
PRIEST LAKE	119.3	52.5	73.0	54.1	Rathdrum Creek	3	74	86
					Hayden Lake	2	74	85
					Coeur d'Alene River	9	80	70
					St. Joe River	3	79	65
					Spokane River	16	79	72
					Palouse River	2	74	82

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

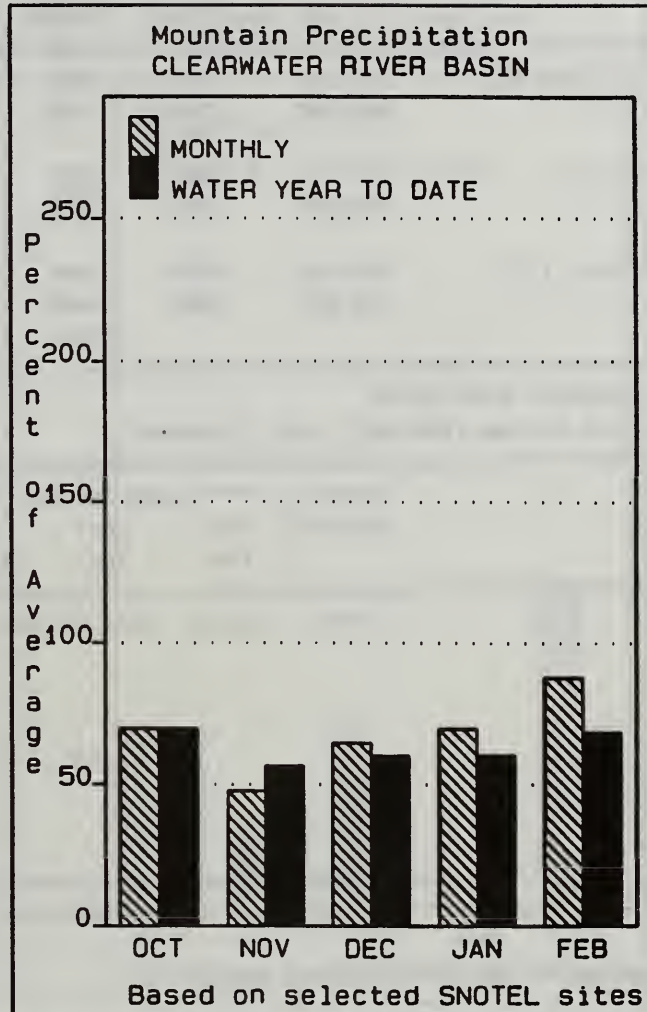
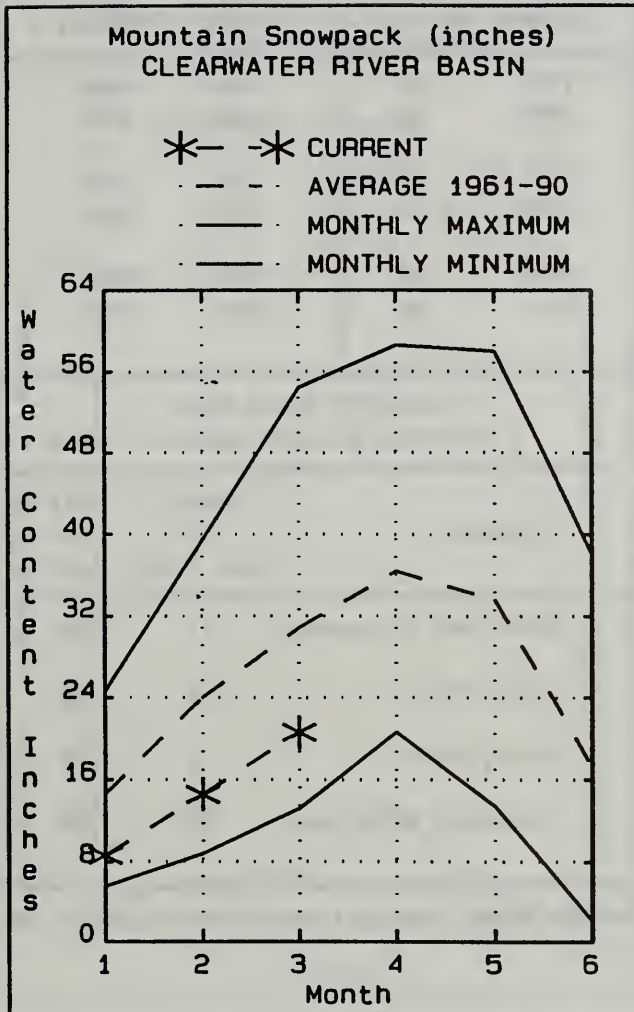
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.  
 (2) - The value is natural flow - actual flow may be affected by upstream water management.



# CLEARWATER RIVER BASIN

MARCH 1, 1994



## WATER SUPPLY OUTLOOK

The Clearwater River basin received slightly below normal precipitation during February. Even so, February was the wettest month of the water year so far. The last week of the month brought extremely heavy snowfall to the basin. One SNOTEL site - Hemlock Butte - received 3.8 inches of moisture on February 23! In spite of the good snowfall, snowpacks are still well below normal: 67% of average for the basin as a whole. Not surprisingly, streams are forecast to yield similar volumes in terms of percent of normal runoff. Storage in Dworshak Reservoir is currently above average: the reservoir is now 73% full. Water users should expect lower than normal peak flows this year and an early return to low flow conditions.

CLEARWATER RIVER BASIN  
Streamflow Forecasts - March 1, 1994

		<===== Drier ===== Future Conditions ===== Wetter =====>						
Forecast Point	Forecast Period	===== Chance Of Exceeding * =====						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
=====								
DWORSHAK Reservoir Inflow (2)	APR-JUL	995	1510	1700	63	1890	2420	2692
	APR-SEP	1060	1640	1840	64	2040	2580	2866
=====								
CLEARWATER at Orofino (1)	APR-JUL	1680	2750	3240	69	3730	4800	4718
	APR-SEP	1790	2920	3433	69	3950	5080	4976
=====								
CLEARWATER at Spalding (1,2)	APR-JUL	2750	4400	5150	68	5900	7550	7618
	APR-SEP	2930	4680	5475	68	6270	8020	8052

CLEARWATER RIVER BASIN  
Reservoir Storage (1000 AF) - End of February

CLEARWATER RIVER BASIN  
Watershed Snowpack Analysis - March 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DWORSHAK	3459.0	2512.0	2562.8	2084.1	North Fork Clearwater	11	88	65
					Lochsa River	4	88	63
					Selway River	6	93	72
					Clearwater Basin Total	20	89	67

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

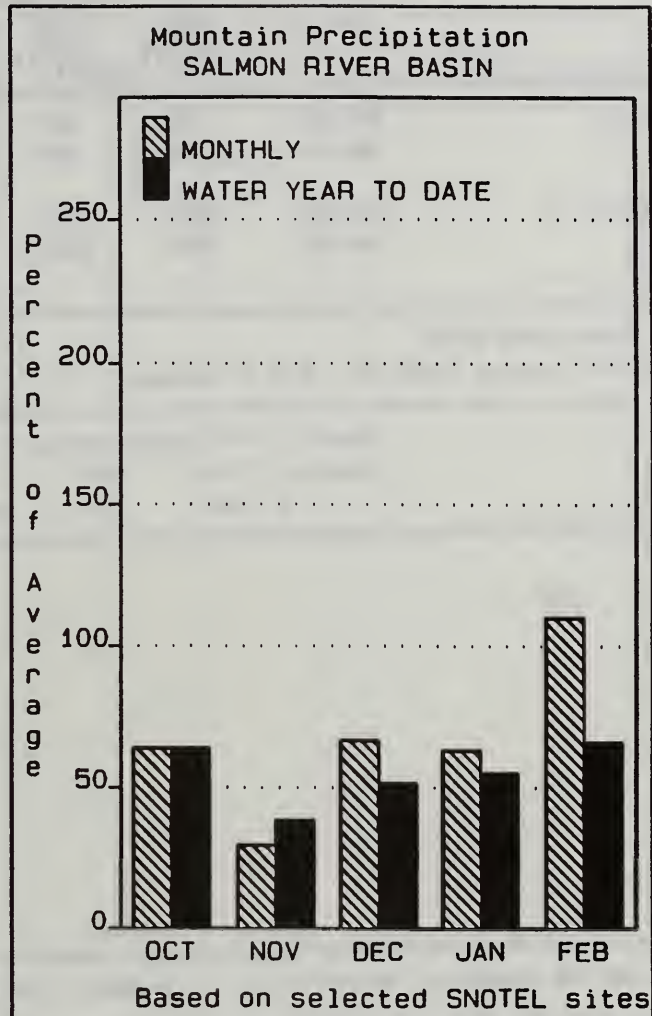
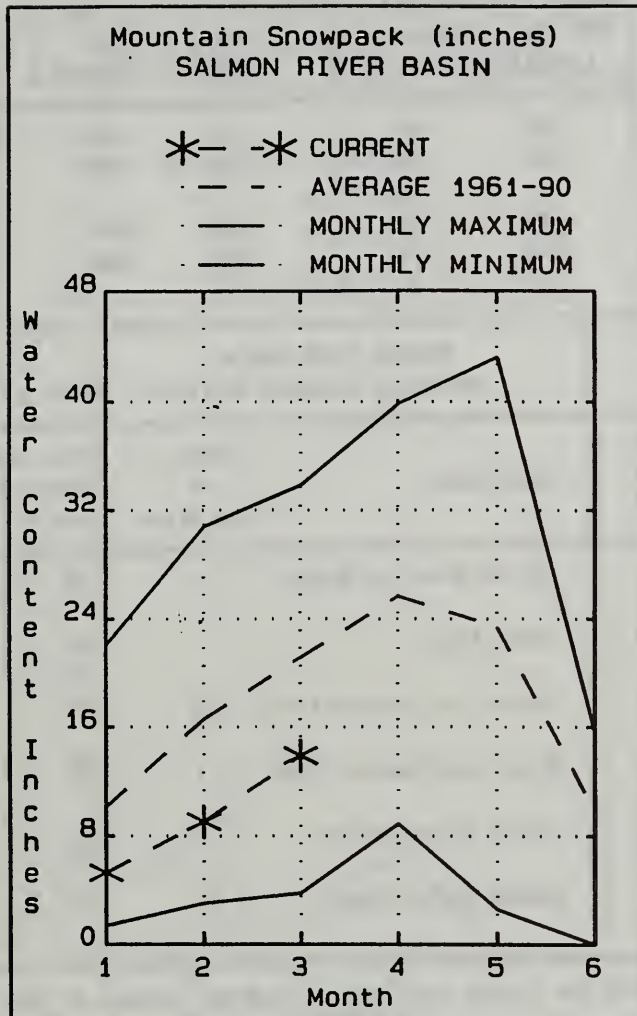
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# SALMON RIVER BASIN

MARCH 1, 1994



## WATER SUPPLY OUTLOOK

February brought above average precipitation to the mountains of the Salmon basin (110%) -- the first time monthly precipitation has been above average this water year. However, the heavy snow that fell during the last week of February only increased the basin's overall snowpack from 55 to 67% of average, still well below normal. Streamflow forecasts reflect this shortage and call for only 68% of average flow for the Salmon at White Bird and 66% for the Salmon at Salmon. Water users should expect lower than normal peak flows, and an early return to low flow conditions. Water supplies for irrigation and recreational uses should be adequate on the major streams in the basin. Smaller tributary streams, however, could run quite low as the dry season progresses.

SALMON RIVER BASIN  
Streamflow Forecasts - March 1, 1994

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		===== Chance Of Exceeding * =====						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
SALMON at Salmon (1)	APR-JUL	235	470	575	66	680	920	869
	APR-SEP	260	535	662	65	785	1060	1019
SALMON at White Bird (1)	APR-JUL	2310	3520	4070	68	4620	5830	5956
	APR-SEP	2540	3880	4489	68	5100	6440	6602

SALMON RIVER BASIN  
Reservoir Storage (1000 AF) - End of February

SALMON RIVER BASIN  
Watershed Snowpack Analysis - March 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					Salmon River ab Salmon	9	66	60
					Lemhi River	7	103	79
					Middle Fork Salmon River	3	67	61
					South Fork Salmon River	3	68	62
					Little Salmon River	4	75	75
					Salmon Basin Total	27	76	67

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

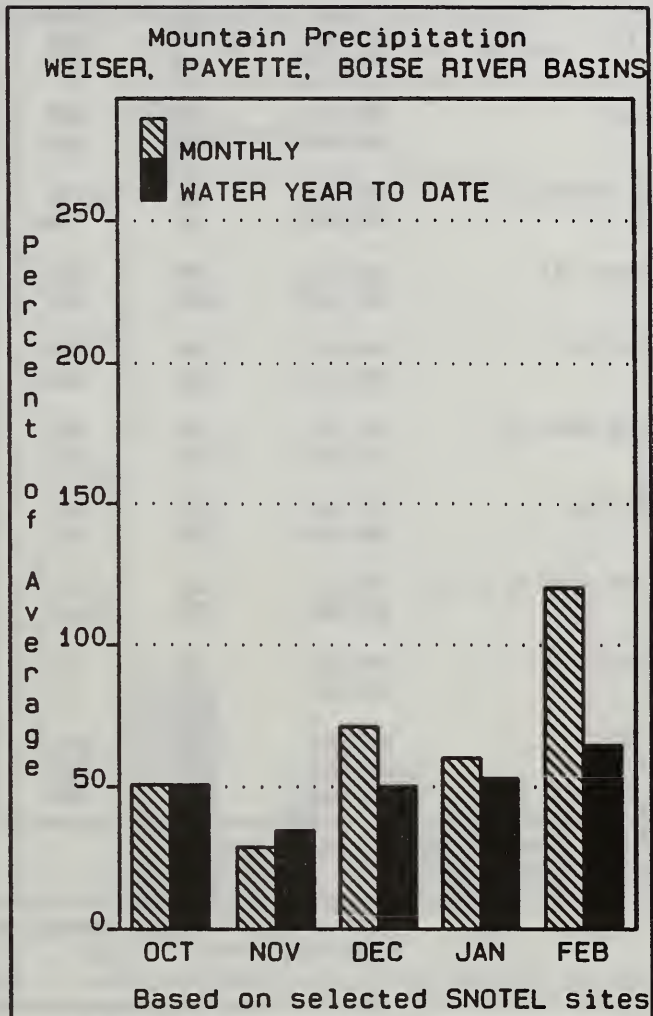
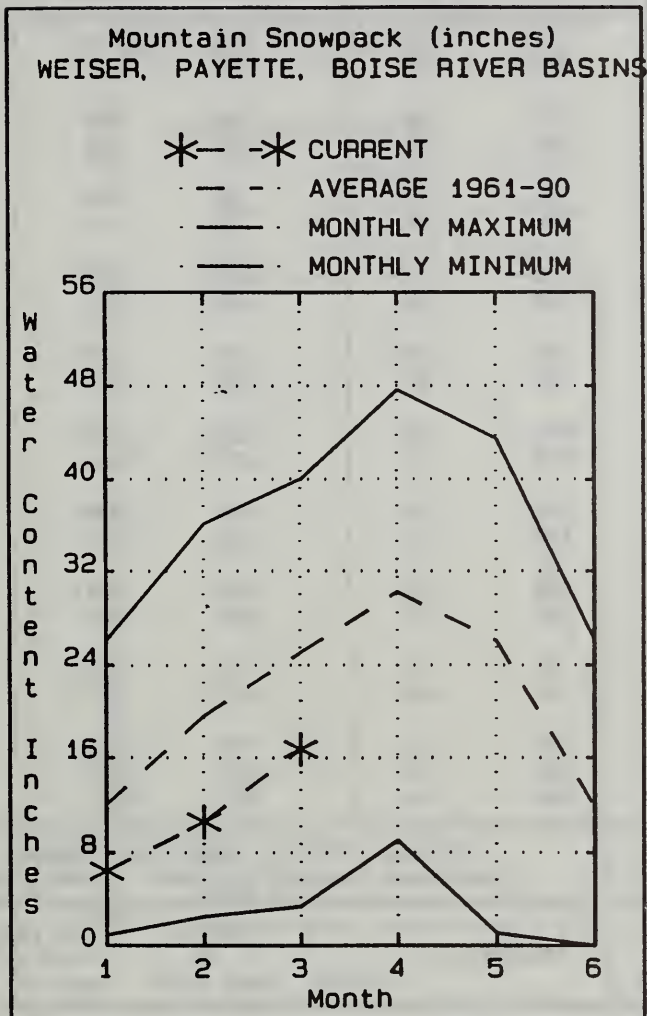
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# WEISER, PAYETTE, BOISE RIVER BASINS

MARCH 1, 1994



## WATER SUPPLY OUTLOOK

Thanks to the late February storms, the Weiser, Payette and Boise basins received well above normal precipitation for the month, increasing the snowpack by half during February! But even that impressive gain has only raised the region's overall snowpack to 67% of average on March 1. Individual basin snowpacks range from 65% in the South Fork Boise to 80% in the Weiser. With only about one month left in the snow accumulation season, these percentages are unlikely to rise much before melt begins. Although streamflows are forecast to be well below normal at 50-70% of average, irrigators in the Payette and Boise basins should have sufficient water for the upcoming growing season, thanks to the plentiful carryover storage from last year. However, careful use and conservation measures are still appropriate, particularly in the Boise basin. The prospect of entering the 1995 season with little or no carryover is quite possible. Water users should keep in touch with their local irrigation districts for more specific information.

**WEISER, PAYETTE, BOISE RIVER BASINS**  
Streamflow Forecasts - March 1, 1994

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						
		=====		Chance Of Exceeding *		=====		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
WEISER nr Weiser (1)	APR-JUL	38	184	250	65	315	465	386
	APR-SEP	43	199	270	65	340	495	415
SF PAYETTE at Lowman	APR-JUL	199	245	275	64	305	350	432
	APR-SEP	230	280	315	65	350	400	488
DEADWOOD RESERVOIR Inflow (2)	APR-JUL	62	76	85	63	95	109	135
	APR-SEP	61	76	86	60	96	111	143
NF PAYETTE nr Cascade (2)	APR-JUL	230	295	342	69	385	455	496
	APR-SEP	235	305	352	66	400	470	533
NF PAYETTE nr Banks (2)	APR-JUL	280	370	435	72	500	590	607
	APR-SEP	300	400	465	67	535	630	690
PAYETTE nr Horseshoe Bend (2)	APR-JUL	715	905	1030	64	1160	1340	1618
	APR-SEP	615	930	1070	61	1210	1490	1755
BOISE near Twin Springs	APR-JUL	270	345	390	62	435	505	631
	APR-SEP	305	375	420	61	465	535	686
SF BOISE at Anderson Rnch Dm (1,2)	APR-JUL	180	245	288	53	335	405	544
	APR-SEP	139	245	295	51	345	450	582
MORES CK nr Arrowrock Dam	APR-JUL	49	69	83	64	97	117	129
	APR-SEP	52	73	87	65	101	122	134
BOISE nr Boise (1,2)	APR-JUN	440	610	690	55	770	940	1264
	APR-JUL	445	680	785	55	890	1130	1421
	APR-SEP	490	740	855	56	970	1220	1535

**WEISER, PAYETTE, BOISE RIVER BASINS**  
Reservoir Storage (1000 AF) - End of February

**WEISER, PAYETTE, BOISE RIVER BASINS**  
Watershed Snowpack Analysis - March 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MANN CREEK	11.1	4.4	2.3	6.8	Mann Creek	2	67	86
CASCADE	703.2	463.3	324.2	393.8	Weiser River	5	71	80
DEADWOOD	161.9	102.0	56.4	84.5	North Fork Payette	8	72	73
ANDERSON RANCH	464.2	329.4	11.3	282.1	South Fork Payette	5	68	65
ARROWROCK	286.6	224.9	143.2	234.8	Payette Basin Total	14	72	72
LUCKY PEAK	293.2	110.0	73.3	122.5	Middle & North Fork Boise	6	68	68
LAKE LOWELL (DEER FLAT)	align="center">177.1	align="center">89.2	align="center">58.3	align="center">140.6	South Fork Boise River	8	60	66
					Mores Creek	5	79	84
					Boise Basin Total	15	68	73
					Canyon Creek	1	63	98

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

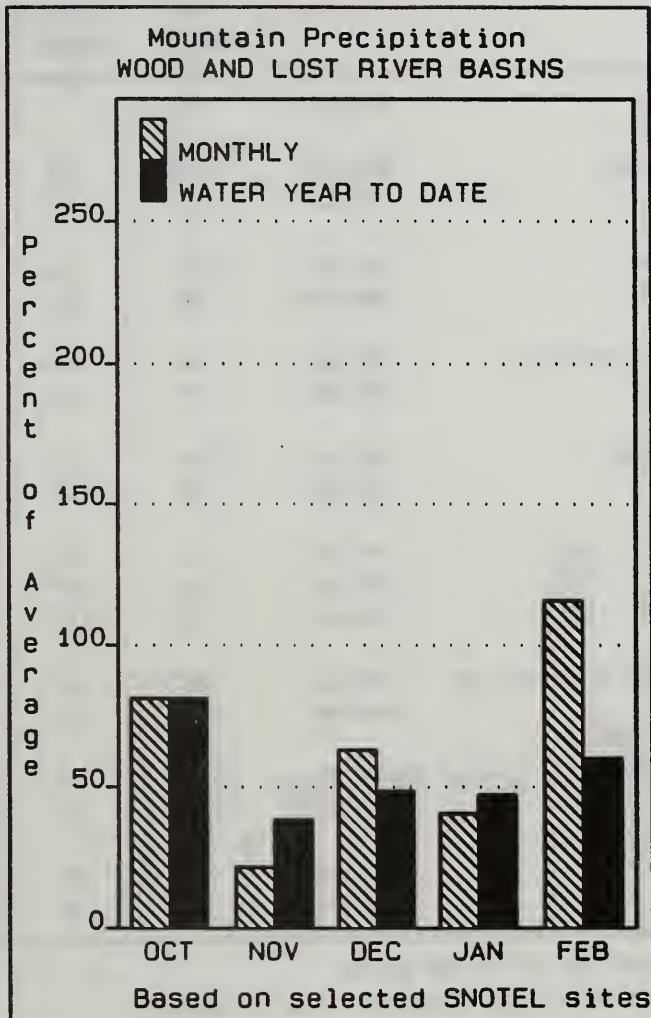
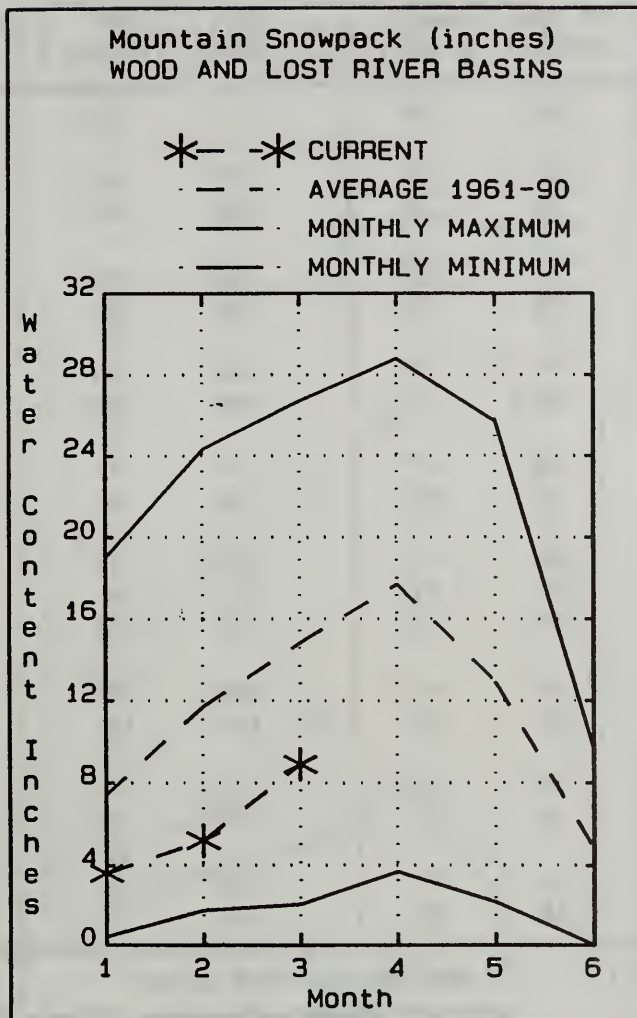
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(2) - The value is natural flow - actual flow may be affected by upstream water management.



# WOOD and LOST RIVER BASINS

MARCH 1, 1994



## WATER SUPPLY OUTLOOK

In spite of receiving 116% of normal mountain precipitation during February, the Wood and Lost basins remain the driest in the state in terms of snowpack. Reporting less than 50% of average until the late-February storms, these basins increased to just 60% of average on March 1. Understandably, streamflow forecasts remain well below average, ranging widely from 52% of average for Magic Reservoir Inflow to 77% of average for Little Lost at Howe. Thanks to last year's plentiful moisture, reservoir storage in the Wood and Lost basins is near normal, with Magic Reservoir currently holding 83% of average or 45% of capacity. Compare that to only 7% of capacity last year at this time! Water supplies could be tight this summer, and irrigators should practice water conservation measures in order to stretch their available water supply. Water users should keep in touch with their local irrigation districts for more specific information.

WOOD AND LOST RIVER BASINS  
Streamflow Forecasts - March 1, 1994

		<<===== Drier ===== Future Conditions ===== Wetter =====>>						
Forecast Point	Forecast Period	Chance Of Exceeding *						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
=====								
BIG WOOD at Hailey	APR-SEP	31		152	53		275	286
BIG WOOD nr Bellevue	APR-JUL	9.2	35	64	35	93	136	183
	APR-SEP	9.9	42	73	37	104	150	197
CAMAS CK nr Blaine	APR-JUL	16.0	44	63	62	82	111	102
	APR-SEP	26	56	76	74	96	126	103
BIG WOOD blw Magic Dam (2)	APR-JUL	25	92	137	47	182	250	294
	APR-SEP	71	111	158	51	205	350	309
LITTLE WOOD nr Carey	APR-JUL	13.0	31	43	47	55	73	92
	APR-SEP	20	39	52	53	65	84	99
BIG LOST at Howell	APR-JUN	66	89	104	74	119	142	141
	APR-JUL	74	107	129	71	151	184	181
	APR-SEP	87	124	149	72	174	210	206
BIG LOST blw Mackay Reservoir (2)	APR-JUL	40	66	84	56	102	129	150
	APR-SEP	44	90	110	60	130	175	182
LITTLE LOST blw Wet Creek	APR-JUL	15.0	20	23	74	26	31	31
	APR-SEP	19.0	25	29	74	33	39	39
LITTLE LOST nr Howe	APR-JUL	20	24	26	79	28	32	33
	APR-SEP	25	30	33	77	36	41	43

WOOD AND LOST RIVER BASINS  
Reservoir Storage (1000 AF) - End of February

WOOD AND LOST RIVER BASINS  
Watershed Snowpack Analysis - March 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MAGIC	191.5	85.3	14.2	102.4	Big Wood ab Magic	8	56	58
LITTLE WOOD	30.0	25.9	11.8	17.6	Camas Creek	4	51	69
MACKAY	44.4	33.0	23.4	32.6	Big Wood Basin Total	12	55	61
					Little Wood River	4	53	64
					Fish Creek	3	41	53
					Big Lost River	7	50	56
					Little Lost River	4	65	64

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

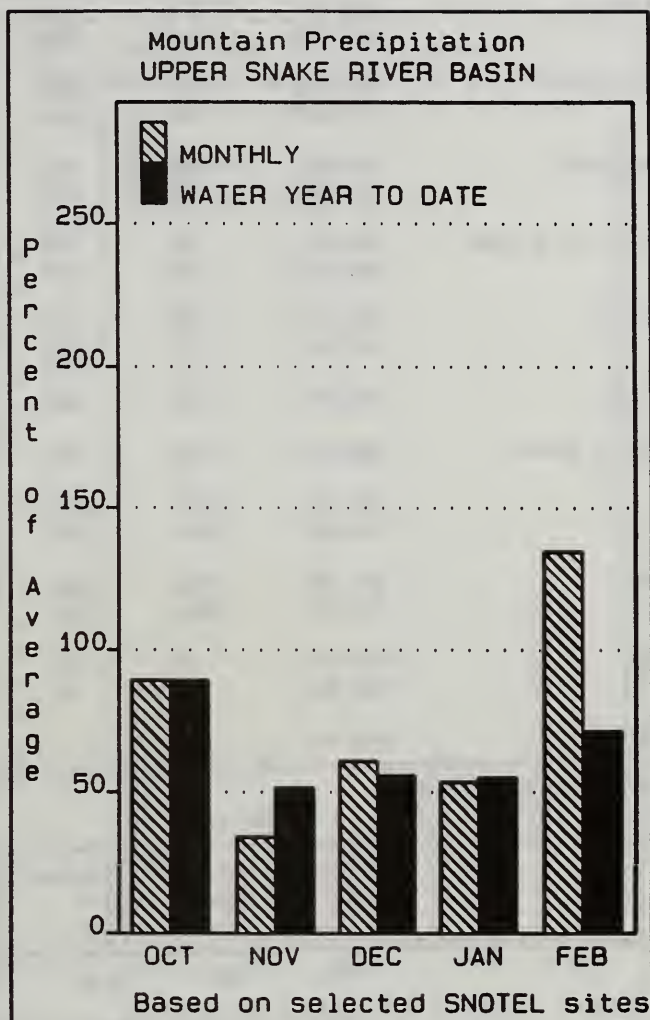
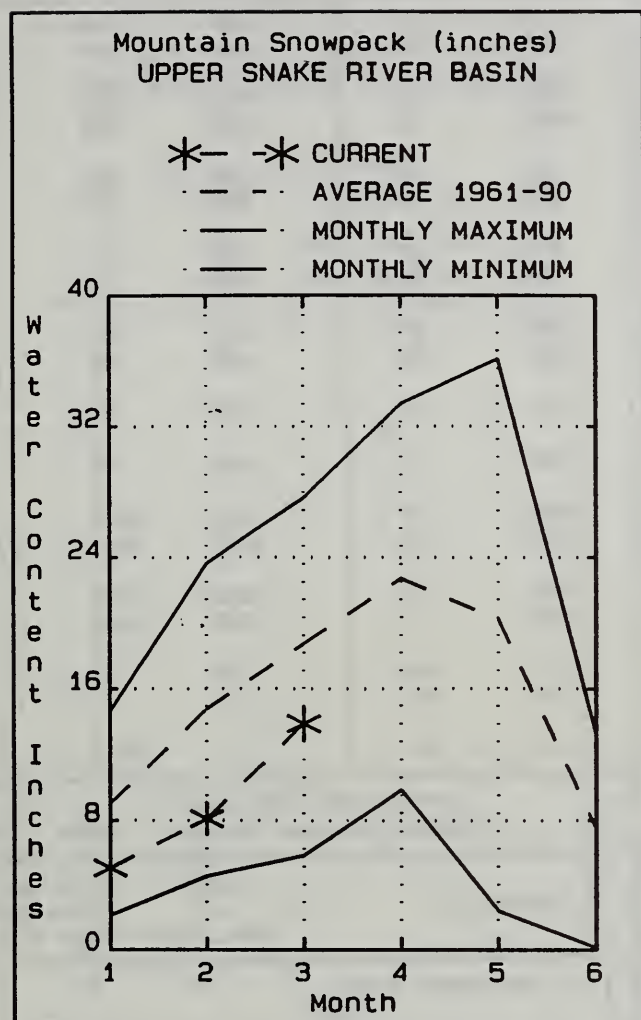
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.



# UPPER SNAKE RIVER BASIN

MARCH 1, 1994



## WATER SUPPLY OUTLOOK

Like most of Idaho, the Upper Snake basin received well above normal precipitation during February. And also like the rest of the state, snowpacks did increase during the month but remain well below normal. Streamflow forecasts have increased from last month's report but remain below normal, in the 65 to 80% of average range. Abundant carryover storage in the Upper Snake basin should alleviate potential shortages for most irrigators. In fact, the reservoir system in the upper Snake basin is currently 87% full, which is 121% of average. Water conservation measures are still advised, however, in order to reduce the possibility of entering the 1995 season with empty reservoirs.

UPPER SNAKE RIVER BASIN  
Streamflow Forecasts - March 1, 1994

Forecast Point	Forecast Period	<===== Drier ===== Future Conditions ===== Wetter =====>						
		=====		Chance Of Exceeding *		=====		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
HENRYS FORK nr Ashton	APR-JUL	330	385	420	77	455	510	544
	APR-SEP	460	510	555	76	600	650	730
HENRYS FORK nr Rexburg	APR-JUL	725	850	940	77	1030	1160	1228
	APR-SEP	930	1100	1200	77	1300	1490	1551
FALLS RIVER nr Squirrel	APR-JUL	220	250	270	74	290	320	364
	APR-SEP	260	290	315	73	340	370	432
TETON abv S Leigh Ck nr Driggs	APR-JUL	95	118	134	88	150	173	153
	APR-SEP	130	157	176	88	195	220	199
TETON nr St. Anthony	APR-JUL	220	220	300	80	335	360	375
	APR-SEP	280	325	365	80	405	435	454
SNAKE nr Moran (1,2)	APR-SEP	495	590	643	74	695	790	869
SALT abv Reservoir nr Etna	APR-SEP	215	275	320	80	365	420	400
SNAKE nr Heise	APR-JUL	1820	2170	2416	70	2660	3010	3451
	APR-SEP	1940	2470	2750	68	3030	3520	4048
SNAKE nr Blackfoot	APR-JUL	2180	2640	3000	70	3360	3900	4281
	APR-SEP	2800	3380	3780	72	4180	4760	5268
PORTNEUF at Topaz	MAR-JUL	37	49	57	66	65	77	86
	MAR-SEP	44	59	69	64	79	94	107
AMERICAN FALLS RESV Inflow	APR-JUL	370		1570	51		2760	3066

UPPER SNAKE RIVER BASIN  
Reservoir Storage (1000 AF) - End of February

UPPER SNAKE RIVER BASIN  
Watershed Snowpack Analysis - March 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HENRYS LAKE	90.4	87.1	59.6	79.4	Camas-Beaver Creeks	4	51	63
ISLAND PARK	135.2	122.7	80.0	110.1	Henrys Fork River	12	76	77
GRASSY LAKE	15.2	13.6	12.9	11.0	Teton River	8	79	81
JACKSON LAKE	847.0	627.5	165.4	481.0	Snake above Jackson Lake	13	81	73
PALISADES	1400.0	1337.0	498.4	1063.1	Gros Ventre River	3	82	69
RIRIE	80.5	44.8	22.9	41.7	Hoback River	6	75	64
BLACKFOOT	348.7	196.0	53.2	242.1	Greys River	5	83	71
AMERICAN FALLS	1672.6	1576.8	1066.4	1277.2	Salt River	5	88	79
					Snake above Palisades	32	81	73
					Willow Creek	7	67	79
					Blackfoot River	5	76	79
					Portneuf River	6	63	73
					Snake abv American Falls	47	77	74

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

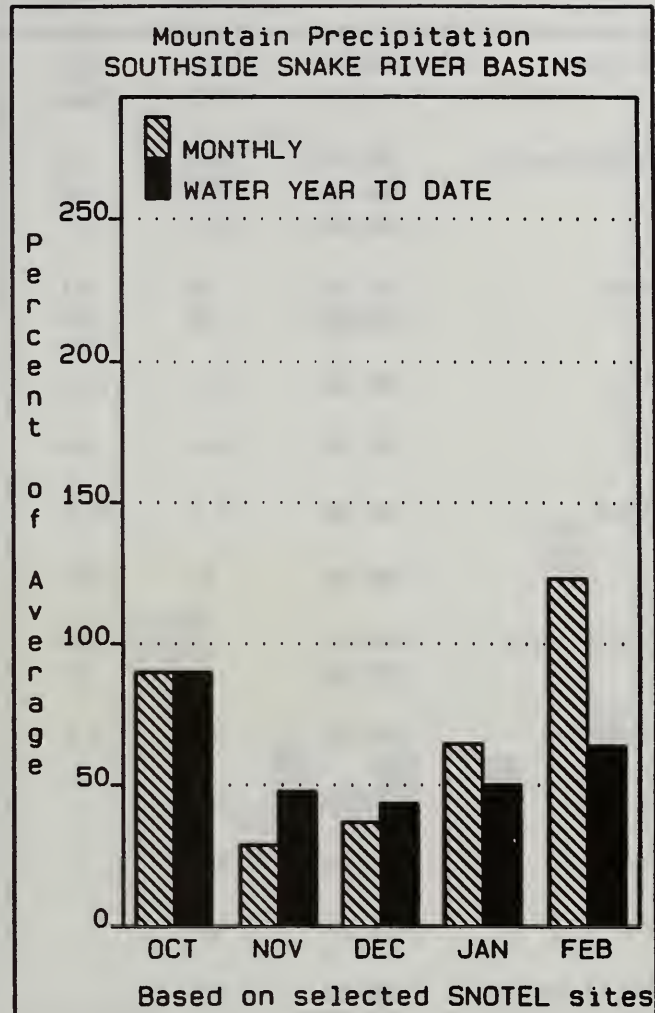
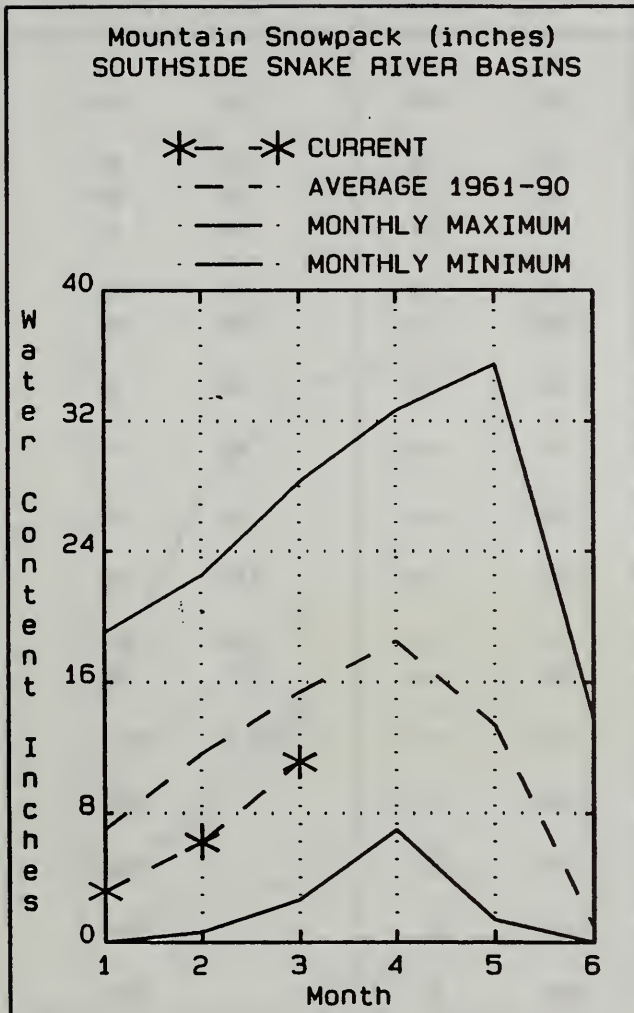
The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.  
 (2) - The value is natural flow - actual flow may be affected by upstream water management.



## SOUTHSIDE SNAKE RIVER BASINS

MARCH 1, 1994



### WATER SUPPLY OUTLOOK

The basins of southern Idaho saw significant precipitation during the storms of late February. Snowpacks increased from about 60% to over 70% of average during the month. While that's a noticeable improvement, snowpacks remain well below normal, and streamflow forecasts are correspondingly low, ranging from 47% for the Owyhee near Rome to 62% for Oakley Reservoir inflow. Reservoir storage is in much better shape than last year at this time. Owyhee and Salmon Falls reservoirs are reporting somewhat below average storage (90 and 86% of average respectively, or 64 and 25% of capacity). Oakley reservoir is lower, with only 49% of normal storage for this time of year (19% of capacity). Water supplies could be tight in some areas this summer; water users should keep in contact with their local irrigation districts for more specific information.

SOUTHSIDE SNAKE RIVER BASINS  
Streamflow Forecasts - March 1, 1994

Forecast Point	Forecast Period	<===== Drier ===== Future Conditions ===== Wetter =====>						
		Chance Of Exceeding *					30-Yr Avg.	
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	(1000AF)
OAKLEY RESERVOIR Inflow	MAR-JUL	10.0	17.0	22	65	27	35	34
	MAR-SEP	10.0	18.0	23	62	28	36	37
SALMON FALLS CK nr San Jacinto	MAR-JUN	14.0	34	48	56	62	82	86
	MAR-JUL	13.0	35	50	55	65	88	91
	MAR-SEP	14.0	37	53	55	69	92	96
BRUNEAU nr Hot Spring	MAR-JUL	68	111	141	60	171	215	235
	MAR-SEP	60	107	138	56	170	215	246
OWYHEE nr Gold Ck (2)	MAR-JUL	5.0	14.0	20	63	26	35	32
OWYHEE nr Owyhee (2)	APR-JUL	14.0	39	55	64	72	96	86
SF OWYHEE nr Whiterock	APR-JUL	4.0	12.0	34	44	56	88	78
OWYHEE nr Rome	MAR-JUL	67	154	262	48	370	530	545
OWYHEE RESERVOIR Inflow (1,2)	MAR-JUL	61	138	255	45	370	630	567
	APR-SEP	52	79	194	46	310	565	418
SUCCOR CK nr Jordan Valley	MAR-JUL	0.1	5.5	9.5	66	13.5	19.3	14.3
SNAKE RIVER at King Hill	APR-JUL	610		1650	57		2690	2896
SNAKE RIVER near Murphy	APR-JUL	565		1700	57		2830	2980
SNAKE RIVER at Weiser	APR-JUL	385		2780	51		5190	5465
SNAKE RIVER at Hells Canyon Dam	APR-JUL	675		3090	50		5520	6129
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	7130	12100	14400	67	16700	21700	21650

SOUTHSIDE SNAKE RIVER BASINS  
Reservoir Storage (1000 AF) - End of February

SOUTHSIDE SNAKE RIVER BASINS  
Watershed Snowpack Analysis - March 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
OAKLEY	77.4	14.6	9.9	29.9	Raft River	6	49	65
SALMON FALLS	182.6	46.2	16.4	53.9	Goose-Trapper Creeks	6	52	65
WILDHORSE RESERVOIR	71.5	34.2	5.0	33.0	Salmon Falls Creek	6	61	73
OWYHEE	715.0	458.6	85.8	512.0	Bruneau River	8	55	69
BROWNLEE	1419.3	1249.8	1096.4	975.0	Owyhee Basin Total	20	44	72

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table. The average is computed for the 1961-1990 base period.

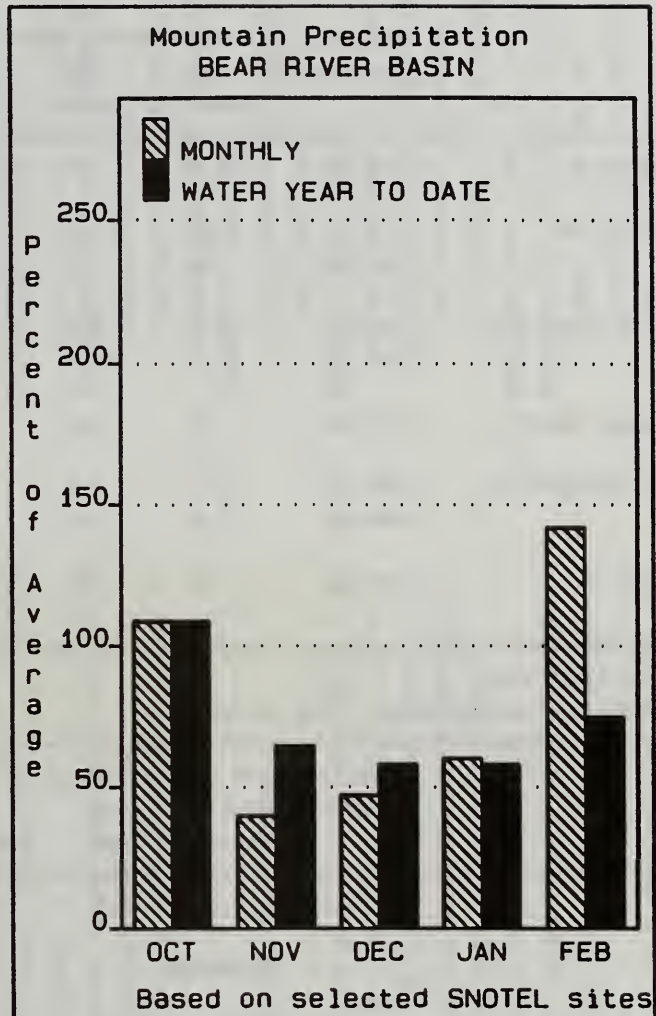
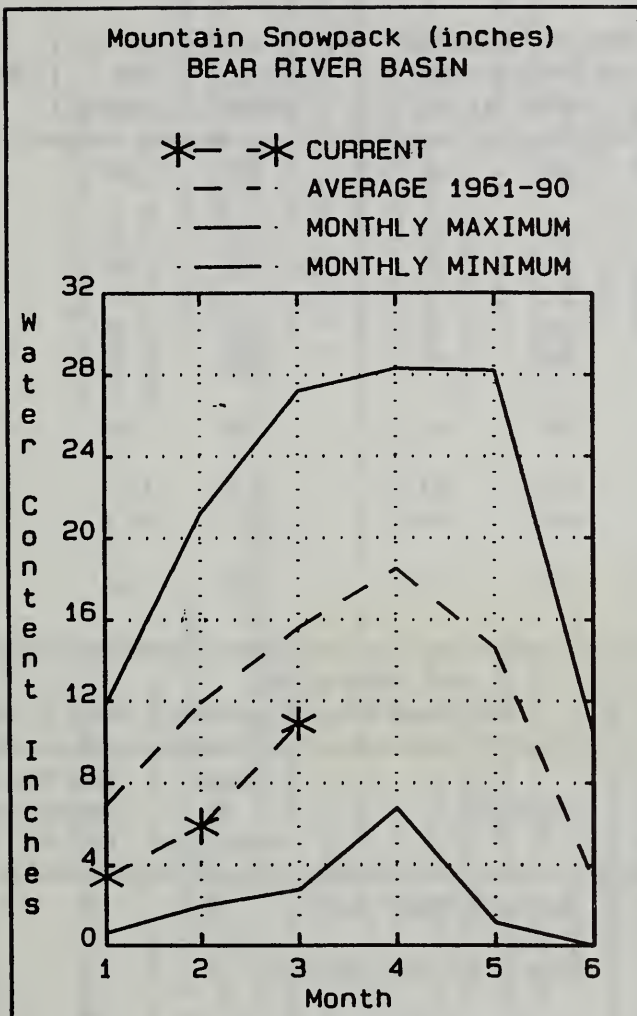
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(2) - The value is natural flow - actual flow may be affected by upstream water management.



## BEAR RIVER BASIN

MARCH 1, 1994



### WATER SUPPLY OUTLOOK

The late-February storms did not ignore the Bear River basin: 142% of average precipitation fell during the month, causing the overall snowpack in this region to increase from 53% to 70% of average. Individual basins vary widely with Montpelier Creek watershed showing just 54% of average snowpack while Mink Creek reports 86% of normal. Streamflow forecasts reflect these low numbers, ranging from 40% to 70% of average throughout the basin. Reservoir storage varies widely in southeastern Idaho. Montpelier Creek is 70% full, well above normal storage for this time of year while Bear Lake remains low, holding only 38% of capacity. Water supplies could be short again this year -- water users are encouraged to keep in touch with their local irrigation districts for more specific information.

BEAR RIVER BASIN

Streamflow Forecasts - March 1, 1994

		<<===== Drier ===== Future Conditions ===== Wetter =====>>						
Forecast Point	Forecast Period	Chance Of Exceeding *						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
=====								
BEAR RIVER nr Randolph	APR-JUL	1.0	49	86	66	123	179	131
SMITHS FORK nr Border, WY	APR-JUL	42	57	68	67	79	94	102
	APR-SEP	48	66	78	66	90	108	118
THOMAS FORK nr WY-ID Stateline	APR-JUL	9.0	16.0	21	64	26	33	33
	APR-SEP	10.0	18.0	23	64	28	36	36
BEAR RIVER blw Stewart Dam (2)	APR-SEP	80	142	185	62	230	290	298
MONTPELIER CREEK nr Montpelier	APR-JUL	3.3	5.8	7.5	61	9.2	11.7	12.2
	APR-SEP	3.4	6.4	8.4	59	10.4	13.4	14.2
CUB RIVER nr Preston	APR-JUL	24	31	35	74	40	46	47

BEAR RIVER BASIN  
Reservoir Storage (1000 AF) - End of February

BEAR RIVER BASIN  
Watershed Snowpack Analysis - March 1, 1994

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
WOODRUFF NARROWS	57.3	31.0	5.5	---	Smiths & Thomas Forks	3	76	68
WOODRUFF CREEK		NO REPORT			Bear River ab WY-ID line	10	71	73
BEAR LAKE	1421.0	539.3	230.2	992.5	Montpelier Creek	2	60	54
MONTPELIER CREEK	4.0	2.8	0.8	1.6	Mink Creek	4	77	86
					Cub River	3	76	87
					Bear River ab ID-UT line	22	73	76
					Malad River	3	62	77

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.



Streamflow forecasts are projections of runoff volumes that would have occurred naturally without influences from upstream reservoirs or diversions. These values are referred to as natural or adjusted flows. To make these adjustments, changes in reservoir storage, diversions, and interbasin transfers are added or subtracted from the observed (actual) streamflow volumes. The following list documents the adjustments made to each forecast point in this report.

Panhandle River Basins

- KOOTENAI R AT LEONIA, ID
  - + LAKE KOOCANUSA (STORAGE CHANGE)
- CLARK FORK AT WHITEHORSE RAPIDS, ID
  - + HUNGRY HORSE (STORAGE CHANGE)
  - + FLATHEAD LAKE (STORAGE CHANGE)
  - + NOXON RAPIDS RESV (STORAGE CHANGE)
- PEND OREILLE LAKE INFLOW, ID
  - + PEND OREILLE R AT NEWPORT, WA
  - + HUNGRY HORSE (STORAGE CHANGE)
  - + FLATHEAD LAKE (STORAGE CHANGE)
  - + NOXON RAPIDS (STORAGE CHANGE)
  - + PEND OREILLE LAKE (STORAGE CHANGE)
- PRIEST R NR PRIEST R, ID
  - + PRIEST LAKE (STORAGE CHANGE)
- COEUR D'ALENE R AT ENAVILLE, ID - No Corrections
- ST. JOE R AT CALDER, ID - No Corrections
- SPOKANE R NR POST FALLS, ID
  - + COEUR D'ALENE LAKE (STORAGE CHANGE)
  - + RATHDRUM PRAIRIE CANAL AT HEUTTER, ID

Clearwater River Basin

- DWORSHAK RESERVOIR INFLOW, ID
  - + CLEARWATER R NR PECK, ID
  - + DWORSHAK RESV (STORAGE CHANGE)
  - CLEARWATER R AT OROFINO, ID
- CLEARWATER R AT OROFINO, ID - No Corrections
- CLEARWATER R AT SPALDING, ID
  - + DWORSHAK RESV (STORAGE CHANGE)

Salmon River Basin

- SALMON R AT SALMON, ID - No Corrections
- SALMON R AT WHITE BIRD, ID - No Corrections

Weiser, Payette, Boise River Basins

- WEISER R NR WEISER, ID - No Corrections
- SF PAYETTE R AT LOWMAN, ID - No Corrections
- DEADWOOD RESERVOIR INFLOW, ID
  - + DEADWOOD R BLW DEADWOOD RESV NR LOWMAN
  - + DEADWOOD RESV (STORAGE CHANGE)
- NF PAYETTE R AT CASCADE, ID
  - + CASCADE RESV (STORAGE CHANGE)
- NF PAYETTE R NR BANKS, ID
  - + CASCADE RESV (STORAGE CHANGE)
- PAYETTE R NR HORSESHOE BEND, ID
  - + DEADWOOD RESV (STORAGE CHANGE)
  - + CASCADE RESV (STORAGE CHANGE)
- BOISE R NR TWIN SPRINGS, ID - No Corrections
- SF BOISE R AT ANDERSON RANCH DAM, ID
  - + ANDERSON RANCH RESV (STORAGE CHANGE)
- MORES CK NR ARROWROCK DAM, ID - No Corrections
- BOISE R NR BOISE, ID
  - + ANDERSON RANCH RESV (STORAGE CHANGE)
  - + ARROWROCK RESV (STORAGE CHANGE)
  - + LUCKY PEAK RESV (STORAGE CHANGE)

Wood and Lost River Basins

- BIG WOOD R AT HAILEY, ID - No Corrections
- BIG WOOD R NR BELLEVUE, ID - No Corrections
- CAMAS CK NR BLAINE, ID - No Corrections
- BIG WOOD R BLW MAGIC DAM NR RICHFIELD, ID
  - + MAGIC RESV (STORAGE CHANGE)
- LITTLE WOOD R NR CAREY, ID
  - + LITTLE WOOD RESV (STORAGE CHANGE)
- BIG LOST R AT HOWELL RANCH NR CHILLY, ID - No Corrections
- BIG LOST R BLW MACKAY RESV NR MACKAY, ID
  - + MACKAY RESV (STORAGE CHANGE)
- LITTLE LOST R BLW WET CK NR HOWE, ID - No Corrections
- LITTLE LOST R NR HOWE, ID (Disc) - No Corrections

Upper Snake River Basin

- HENRYS FORK NR ASHTON, ID
  - + HENRYS LAKE (STORAGE CHANGE)
  - + ISLAND PARK RESV (STORAGE CHANGE)
- HENRYS FORK NR REXBURG, ID
  - + HENRYS LAKE (STORAGE CHANGE)
  - + ISLAND PARK RESV (STORAGE CHANGE)
  - + DIV FM HENRYS FK BTW ASHTON & ST. ANTHONY, ID
  - + DIV FM HENRYS FK BTW ST. ANTHONY & REXBURG, ID
  - + GRASSY LAKE (STORAGE CHANGE)
- FALLS R NR SQUIRREL, ID
  - + GRASSY LAKE (STORAGE CHANGE)
- TETON R ABV SO LEIGH CK NR DRIGGS, ID - No Corrections
- TETON R NR ST. ANTHONY, ID
  - CROSS CUT CANAL
  - + SUM OF DIVERSIONS ABV GAGE
- SNAKE R NR MORAN, WY
  - + JACKSON LAKE (STORAGE CHANGE)
- PALISADES RESERVOIR INFLOW, ID
  - + SNAKE R NR IRWIN, ID
  - + PALISADES RESV (STORAGE CHANGE)
  - + JACKSON LAKE (STORAGE CHANGE)
- SNAKE R NR HEISE, ID
  - + PALISADES RESV (STORAGE CHANGE)
  - + JACKSON LAKE (STORAGE CHANGE)
- SNAKE R NR BLACKFOOT, ID
  - + PALISADES RESV (STORAGE CHANGE)
  - + JACKSON LAKE (STORAGE CHANGE)
  - + DIV FM SNAKE R BTW HEISE AND SHELLY GAGES
  - + DIV FM SNAKE R BTW SHELLY AND BLACKFT, ID
- PORTNEUF R AT TOPAZ, ID - No Corrections
- AMERICAN FALLS RESERVOIR INFLOW, ID
  - + SNAKE R AT NEELEY, ID
  - + AMERICAN FALLS (STORAGE CHANGE)
  - + PALISADES RESV (STORAGE CHANGE)
  - + JACKSON LAKE (STORAGE CHANGE)



Southside Snake River Basins

OAKLEY RESERVOIR INFLOW, ID  
+ GOOSE CK ABV TRAPPER CK NR OAKLEY, ID  
+ TRAPPER CK NR OAKLEY, ID  
SALMON FALLS CK NR SAN JACINTO, NV - No Corrections  
BRUNEAU R NR HOT SPRINGS, ID - No Corrections  
OWYHEE R NR GOLD CK, NV  
+ WILDHORSE RESV (STORAGE CHANGE)  
OWYHEE R NR OWYHEE, NV  
+ WILDHORSE RESV (STORAGE CHANGE)  
OWYHEE R NR ROME, OR  
+ WILDHORSE RESV (STORAGE CHANGE)  
+ JORDAN VALLEY RESV (STORAGE CHANGE)  
OWYHEE RESERVOIR INFLOW, OR  
+ OWYHEE R BLW OWYHEE DAM, OR  
+ OWYHEE RESV (STORAGE CHANGE)  
+ DIV TO NORTH AND SOUTH CANALS  
SUCCOR CK NR JORDAN VALLEY, OR - No Corrections  
SNAKE R - KING HILL, ID - No Corrections  
SNAKE R NR MURPHY, ID - No Corrections  
SNAKE R AT WEISER, ID - No Corrections  
SNAKE R AT HELLS CANYON DAM, ID  
+ BROWNLEE RESV (STORAGE CHANGE)

Bear River Basin

BEAR R NR RANDOLPH, UT  
+ SULPHUR CK RESV (STORAGE CHANGE)  
+ CHAPMAN CANAL DIVERSION  
+ WOODRUFF NARROWS RESV (STORAGE CHANGE)  
SMITHS FORK NR BORDER, WY - No Corrections  
THOMAS FORK NR WY-ID STATELINE - No Corrections  
BEAR R AT HARER, ID (Disc.)  
+ SULPHUR CK RESV (STORAGE CHANGE)  
+ CHAPMAN CANAL DIVERSION  
+ WOODRUFF NARROWS RESV (STORAGE CHANGE)  
BEAR R BLW STEWART DAM, ID  
+ SULPHUR CK RESV (STORAGE CHANGE)  
+ CHAPMAN CANAL DIVERSION  
+ WOODRUFF NARROWS RESV (STORAGE CHANGE)  
+ DINGLE INLET CANAL  
+ RAINBOW INLET CANAL  
MONTPELIER CK AT IRR WEIR NR MONTPELIER, ID  
+ MONTPELIER CK RESV (STORAGE CHANGE)  
CUB R NR PRESTON, ID - No Corrections

**RESERVOIR CAPACITY DEFINITIONS** - Different agencies use various definitions when reporting reservoir capacity and contents. Reservoir storage terms include dead, inactive, active, and surcharge storage. The table below lists these volumes for each reservoir in this report, and defines the storage volumes that SCS uses when reporting capacity and current reservoir storage. In most cases, SCS reports usable storage, which includes active and inactive storage.

BASIN/ RESERVOIR	DEAD STORAGE	INACTIVE STORAGE	ACTIVE STORAGE	SURCHARGE STORAGE	SCS CAPACITY	SCS FIGURES INCLUDE
<b>PANHANDLE REGION</b>						
HUNGRY HORSE	39.73	--	3451.00	--	3451.0	ACTIVE
FLATHEAD LAKE	Unknown	--	1791.00	--	1971.0	ACTIVE
NOXON RAPIDS	Unknown	--	335.00	--	335.0	ACTIVE
PEND OREILLE	406.20	112.40	1042.70	--	1561.3	DEAD + INACTIVE + ACTIVE
COEUR D'ALENE	--	13.50	225.00	--	238.5	INACTIVE + ACTIVE
PRIEST LAKE	20.00	28.00	71.30	--	119.3	DEAD + INACTIVE + ACTIVE
<b>CLEARWATER BASIN</b>						
DWORSHAK	--	1452.00	2007.00	--	3459.0	INACTIVE + ACTIVE
<b>WEISER/BOISE/PAYETTE BASINS</b>						
MANN CREEK	1.61	0.24	11.10	--	11.1	ACTIVE
CASCADE	--	50.00	653.20	--	703.2	INACTIVE + ACTIVE
DEADWOOD	1.50	--	161.90	--	161.9	ACTIVE
ANDERSON RANCH	29.00	41.00	423.18	--	464.2	INACTIVE + ACTIVE
ARROWROCK	--	--	286.60	--	286.6	ACTIVE
LUCKY PEAK	--	28.80	264.40	13.80	293.2	INACTIVE + ACTIVE
LAKE LOWELL	--	8.00	169.10	--	177.1	INACTIVE + ACTIVE
<b>WOOD/LOST BASINS</b>						
MAGIC	--	--	191.50	--	191.5	ACTIVE
LITTLE WOOD	--	--	30.00	--	30.0	ACTIVE
MACKAY	0.13	--	44.37	--	44.4	ACTIVE
<b>UPPER SNAKE BASIN</b>						
HENRYS LAKE	--	--	90.40	--	90.4	ACTIVE
ISLAND PARK	0.40	--	127.30	7.90	135.2	ACTIVE + SURCHARGE
GRASSY LAKE	--	--	15.18	--	15.2	ACTIVE
JACKSON LAKE	--	--	847.00	--	847.0	ACTIVE
PALISADES	44.10	155.50	1200.00	--	1400.0	DEAD + INACTIVE + ACTIVE
RIRIE	4.00	6.00	80.54	10.00	80.5	ACTIVE
BLACKFOOT	--	--	348.73	--	348.7	ACTIVE
AMERICAN FALLS	--	--	1672.60	--	1672.6	ACTIVE
<b>SOUTHSIDE SNAKE BASINS</b>						
OAKLEY	--	--	77.40	--	77.4	ACTIVE
SALMON FALLS	48.00	--	182.65	--	182.6	ACTIVE
WILDHORSE	--	--	71.50	--	71.5	ACTIVE
OWYHEE	406.83	--	715.00	--	715.0	ACTIVE
BROWNLEE	0.45	444.00	975.30	--	1419.3	INACTIVE + ACTIVE
<b>BEAR RIVER BASIN</b>						
WOODRUFF NARROWS	--	1.50	57.30	--	57.3	ACTIVE
WOODRUFF CREEK	--	4.00	4.00	--	4.0	ACTIVE
BEAR LAKE	--	--	1421.00	--	1421.0	ACTIVE
MONTPELIER CREEK	0.21	--	3.84	--	4.0	DEAD + ACTIVE



## Interpreting Streamflow Forecasts

### Introduction

Each month, five forecasts are issued for each forecast point and each forecast period. Unless otherwise specified, all streamflow forecasts are for streamflow volumes that would occur naturally without any upstream influences. Water users need to know what the different forecasts represent if they are to use the information correctly when making operational decisions. The following is an explanation of each of the forecasts.

**Most Probable (50 Percent Chance of Exceeding) Forecast.** This forecast is the best estimate of streamflow volume that can be produced given current conditions and based on the outcome of similar past situations. There is a 50 percent chance that the streamflow volume will exceed this forecast value. There is a 50 percent chance that the streamflow volume will be less than this forecast value.

The most probable forecast will rarely be exactly right, due to errors resulting from future weather conditions and the forecast equation itself. This does not mean that users should not use the most probable forecast; it means that they need to evaluate existing circumstances and determine the amount of risk they are willing to take by accepting this forecast value.

### To Decrease the Chance of Having Too Little Water

If users want to make sure there is enough water available for their operations, they might determine that a 50 percent chance of the streamflow volume being lower than the most probable forecast is too much risk to take. To reduce the risk of not having enough water available during the forecast period, users can base their operational decisions on one of the forecasts with a greater chance of being exceeded (or possibly some point in-between). These include:

**70 Percent Chance of Exceeding Forecast.** There is a 70 percent chance that the streamflow volume will exceed this forecast value. There is a 30 percent chance the streamflow volume will be less than this forecast value.

**90 Percent Chance of Exceeding Forecast.** There is a 90 percent chance that the streamflow volume will exceed this forecast value. There is a 10 percent chance the streamflow volume will be less than this forecast value.

### To Decrease the Chance of Having Too Much Water

If users want to make sure they don't have too much water, they might determine that a 50 percent chance of the streamflow being higher than the most probable forecast is too much of a risk to take. To reduce the risk of having too much water available during the forecast period, users can base their operational decisions on one of the forecasts with a smaller chance of being exceeded. These include:

**30 Percent Chance of Exceeding Forecast.** There is a 30 percent chance that the streamflow volume will exceed this forecast value. There is a 70 percent chance the streamflow volume will be less than this forecast value.

**10 Percent Chance of Exceeding Forecast.** There is a 10 percent chance that the streamflow volume will exceed this forecast value. There is a 90 percent chance the streamflow volume will be less than this forecast value.

### Using the forecasts - an example

**Using the Most Probable Forecast.** Using the example forecasts shown below, users can reasonably expect 36,000 acre-feet to flow past the gaging station on the Mary's River near Deeth between March 1 and July 31.

**Using the Higher Exceedance Forecasts.** If users anticipate a somewhat drier trend in the future (monthly and seasonal weather outlooks are available from the National Weather Service every two weeks), or if they are operating at a level where an unexpected shortage of water could cause problems, they might want to plan on receiving only 20,000 acre-feet (from the 70 percent chance of exceeding forecast). In seven out of ten years with similar conditions, streamflow volumes will exceed the 20,000 acre-foot forecast.

If users anticipate extremely dry conditions for the remainder of the season, or if they determine the risk of using the 70 percent chance of exceeding forecast is too great, then they might plan on receiving only 5000 acre-feet (from the 90 percent chance of exceeding forecast). Nine out of ten years with similar conditions, streamflow volumes will exceed the 5000 acre-foot forecast.

**Using the Lower Exceedance Forecasts.** If users expect wetter future conditions, or if the chance that five out of every ten years with similar conditions would produce streamflow volumes greater than 36,000 acre-feet was more than they would like to risk, they might plan on receiving 52,000 acre-feet (from the 30 percent chance of exceeding forecast) to minimize potential flooding problems. Three out of ten years with similar conditions, streamflows will exceed the 52,000 acre-foot forecast.

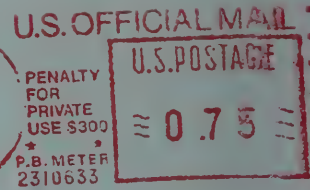
In years when users expect extremely wet conditions for the remainder of the season and the threat of severe flooding and downstream damage exists, they might choose to use the 76,000 acre-foot (10 percent chance of exceeding) forecast for their water management operations. Streamflow volumes will exceed this level only one year out of ten.

UPPER HUMBOLDT RIVER BASIN									
FORECAST POINT	FORECAST PERIOD	STREAMFLOW FORECASTS							
		← DRIER ——— FUTURE CONDITIONS ——— WETTER →				Chance of Exceeding			
		80 % (1000AF)(1000AF)	70 % (1000AF)(1000AF)	50 % (Most Probable) (1000AF) (% AVG)	30 % (1000AF) (1000AF)	10 % (1000AF) (1000AF)	25 YR (1000AF)	25 YR (1000AF)	25 YR (1000AF)
MARY'S RIVER nr Deeth	MAR-JUL APR-JUL	5.0 8.0	20.0 17.0	36 31	77 74	52 45	76 67	47 42	
LAMOILLE CREEK nr Lamaille	MAR-JUL APR-JUL	6.0 4.0	16.0 15.0	24 22	79 75	32 30	43 41	31 30	
NF HUMBOLDT RIVER at Devils Gate	MAR-JUL	6.0	12.0	43	73	74	121	59	

For more information concerning streamflow forecasting ask your local SCS field office for a copy of "A Field Office Guide for Interpreting Streamflow Forecasts".



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In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.